**Background:**
The neuroendocrine tumor (NET) proliferation-based grading system (ENETs) has proved reliable for prognostic stratification, however concerns exist on Ki-67 heterogeneity. Our aim was to evaluate intratumor Ki-67 index heterogeneity in primary and metastatic sites.

**Aim:**
Retrospectively study a series of GEP NETs and:
- Compare mitotic index evaluation and Ki-67 evaluation
- Evaluate Ki-67 in different samples of the same lesion - heterogeneity
- Evaluate Ki-67 between multiple primitive NETs on first diagnosis.
- Evaluate Ki-67 in recurrent disease, local or distant.

**Methods:**
- 170 GEP-NETs from the Histopathology archives at the University of Genova, San Martino Hospital, dating from 1993-2011
- 50 with clinical follow-up (mean follow up was 59 months, range 2-168 months).

**Results:**

Concordance between mitoses and Ki-67 evaluation

<table>
<thead>
<tr>
<th>Grade</th>
<th>Mitoses/10HPF</th>
<th>Ki67 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>G1</td>
<td>&gt;2</td>
<td>≤2</td>
</tr>
<tr>
<td>G2</td>
<td>2-20</td>
<td>3-20</td>
</tr>
<tr>
<td>G3</td>
<td>&gt;20</td>
<td>&gt;20</td>
</tr>
</tbody>
</table>

**Conclusions:** Differences in grade between primary and metastatic sites are important and evaluation of Ki67 at all sites may be significant for patient management.